

Notes on the genus *Thymelicus* HÜBNER (Lepidoptera, HesperIIDae)

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Abstract

The identification of the *Thymelicus* species does not pose many problems, but difficulties may arise in distinguishing between *T. acteon* (ROTTENBURG) and *T. hamza* (OBERTHÜR) and between females of *T. lineola* (OCHSENHEIMER) and *T. sylvestris* (PODA), especially when the antennae are lost. Useful characters of the genitalia are described and figured as an aid in the identification of these species. *T. hamza* is shown to be restricted to Northern Africa (Morocco, Algeria, Cyrenaica). *Adopaea* [sic] *nova* REVERDIN, 1916, and *Adopaea alaica* FILIPJEV, 1931, considered subspecies of *T. hamza* by EVANS (1949), are shown to be congeneric with, but specifically distinct from *T. hamza*, bringing the total number of *Thymelicus* species to ten. *Adopaea pfeifferi* BYTINSKI-SALZ & BRANDT, 1937, is a junior synonym of *Adopaea hyrax* LEDERER, 1861, and not of "*Thymelicus hamza alaica* FILIPJEV" as supposed by EVANS (1949). Finally it is argued that *Papilio flava* BRÜNNICH, 1763, is a junior synonym of *Papilio sylvestris* PODA, 1761.

Introduction

The genus *Thymelicus* HÜBNER, [1819] (*Adopaea* BILLBERG, 1820, often misspelled "*Adopaea*", is a junior subjective synonym) is currently supposed to consist of the following eight species (EVANS, 1949): *T. lineola* (OCHSENHEIMER, 1808) (often incorrectly spelled "*lineolus*"; *lineola* is a noun meaning "little line", and not an adjective), *T. sylvestris* (PODA, 1761), *T. hamza* (OBERTHÜR, 1876), *T. acteon* (ROTTENBURG, 1775), *T. hyrax* (LEDERER, 1861), *T. stigma* (STAUDINGER, 1886), *T. leonina* (BUTLER, 1878), and *T. sylvaticus* (BREMER, 1861). The genus is restricted to the Palearctic Region, but *T. lineola* was introduced into North America in the beginning of this century and now occurs over a wide area in Eastern Canada and Northeastern USA, and rather recently in Western Canada (see e.g. HOWE, 1975).

Although the *Thymelicus* species are rather similar, most species can more or less easily be distinguished by external characters (shape of stigma in

the male, presence or absence of spots, colour of vestiture of palps, colour of antennal nudum, etc.). Problems may arise with females of *T. lineola* and *T. sylvestris*, especially when the antennae are lost. The North African *T. hamza* may also cause some problems ; certainly with EVANS' (1949) key it is difficult to distinguish it from *T. acteon*. Therefore, it seemed worthwhile to describe and figure the distinguishing characters of the genitalia of the four species.

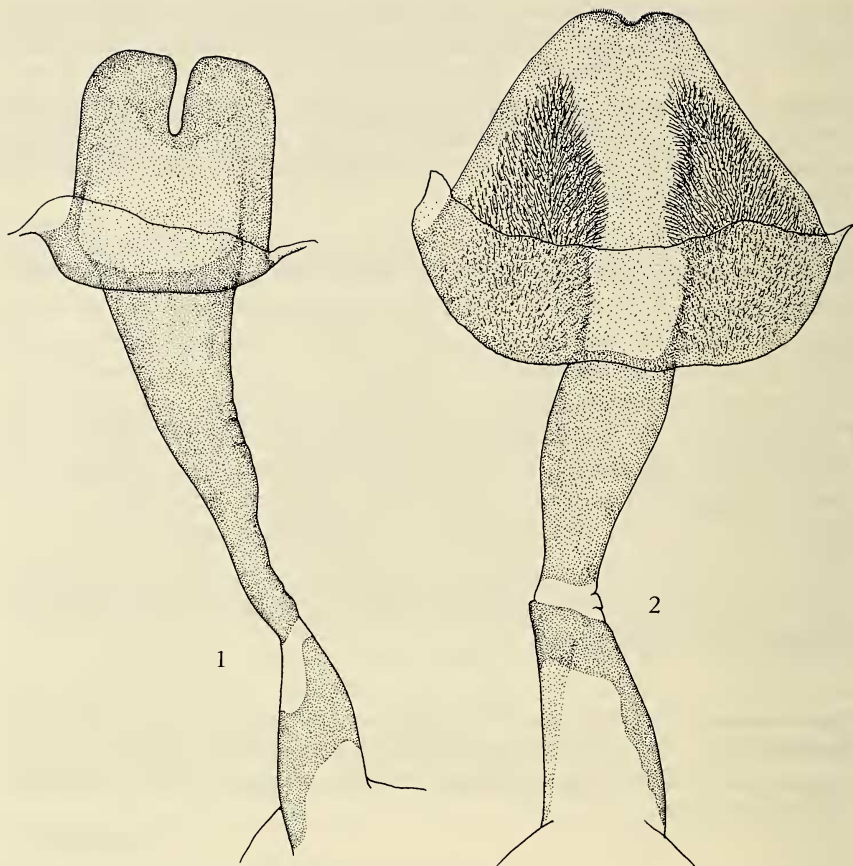
Generally, the *Thymelicus* species have a more or less continuous distribution (except for island populations), but according to EVANS (1949) the distribution of *T. hamza* is highly discontinuous, the species being found in Morocco, Algeria, Cyrenaica, Turkey, Iran and Central Asia. Since the differences between the geographic isolates are relatively great, their subspecific status has been re-examined. As a consequence, the name *T. hamza* must be restricted to African populations, the Turkish and Central Asian "subspecies" cannot be assigned to any known species and must be considered species on their own, and the occurrence in Iran relates to *T. hyrax*, as will be shown in the following paragraphs.

Finally a nomenclatural note is added on *T. sylvestris*, since this species can still be found in the literature under the name of *Thymelicus* (or *Adopoea*) *flava* (BRÜNNICH).

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The distinction of females of *Thymelicus lineola* (OCHSENHEIMER) and *Thymelicus sylvestris* (PODA)

Both sexes of *T. lineola* and *T. sylvestris* can be distinguished by the colour of the nudum of the antennae : black or dark chestnut in *T. lineola*, pale brown in *T. sylvestris*. If the antennae are lost the males can easily be distinguished by the shape of the stigma on the forewing : short, inconspicuous and bipartite in *T. lineola*, long, conspicuous and continuous in *T. sylvestris*. The females are, however, very similar externally. They can easily be distinguished with the help of the genitalia. The only figures of the female genitalia of the two species seem to be in PIERCE & BEIRNE (1941), but these are very schematic and I have some trouble in recognizing the species from these figures. The distinguishing characters are as follows (figs. 1, 2) :



Figs. 1, 2. Female genitalia (sterigma, colliculum, ductus bursae) : 1 : *Thymelicus lineola* ; 2 : *Thymelicus sylvestris*.

T. lineola – sterigma rectangular, completely smooth and with deep apical incision to almost 1/3 of length of sterigma ; narrow antevaginal area ; overlapping intersegmental membrane also smooth ; colliculum funnel-like, amply twice as long as greatest width (at ostium), rather slightly sclerotized ; ductus about half as long as colliculum, with bandlike sclerotization ; bursa spheroid, no signum.

T. sylvestris – sterigma rounded triangular, apically slightly indented, centrally and distally smooth, dorsal side of apex with short microtrichia, lateral folds (not swollen as in *T. alaicus*, see fig. 17) with long, dense

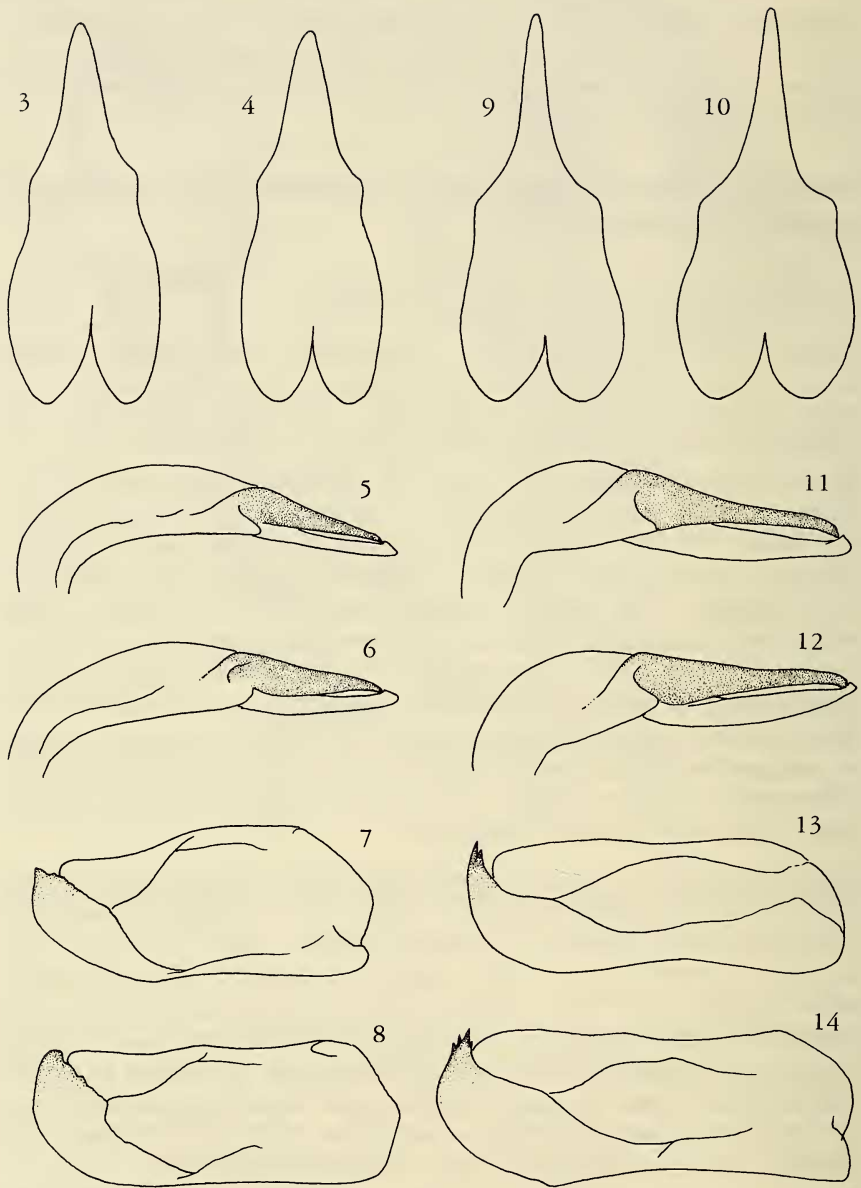
hairs ; hardly an antevaginal area ; intersegmental membrane slightly sclerotized, centrally smooth, for the rest densely set with microtrichia ; colliculum cylindrical, but slightly narrowing towards ductus, twice as long as wide ; ductus with rather strong, pronglike sclerotization ; bursa elongate-ellipsoid, no signum.

Differences between *Thymelicus hamza* (OBERTHÜR, 1876) and *Thymelicus acteon* (ROTTEMBERG, 1775)

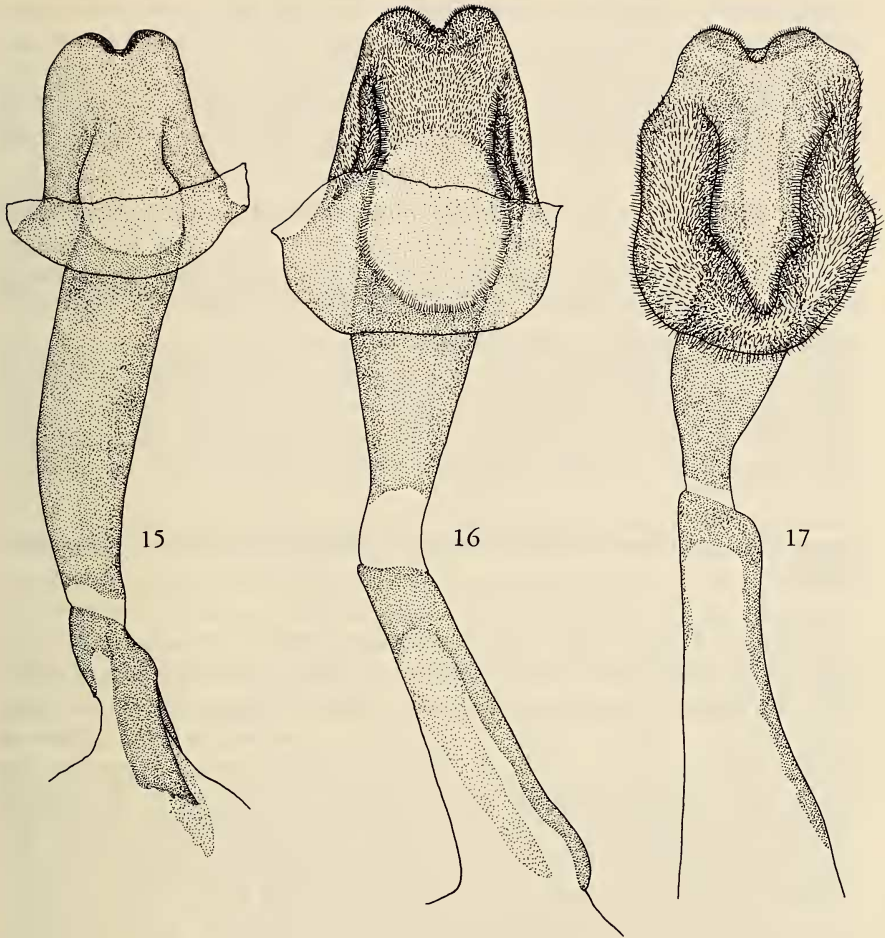
Externally the two species, which fly together in Northwestern Africa, can be distinguished by the presence in *T. acteon* of yellow median spots in spaces 2 or 3 to 8 on the upper and underside of the forewing, more or less contrasting with the shaded brown ground colour. Both species were nicely illustrated by OBERTHÜR (1915, figs. 2420-2422, 2425-2429). The difference is clear enough when the specimens are fresh, but in worn or light-coloured specimens of *T. acteon*, the difference can be less obvious. Moreover, in the eastern Mediterranean a subspecies of *T. acteon* occurs (ssp. *heydeni* PLÖTZ) in which the pale median spots may be absent. Enough reason to look for additional differentiating characters, especially in the genitalia. The literature almost completely lets us down at this point. The meaningless, overschematic drawings of the male genitalia by EVANS (1949) are of very little use, and the succinct descriptions of the male genitalia by HIGGINS (1975) are not detailed enough. Apparently the female genitalia have never been studied. In the following lines, *T. acteon* is compared with Northwest African *T. hamza*. The possibility of the occurrence of the latter species in the Eastern Mediterranean and further east is discussed in the next paragraph.

Male genitalia (figs. 3-14). – In dorsal view, uncus + tegumen are slender, about 2.6 times as long as greatest width, in *T. hamza*, whereas in *T. acteon* the length is about 2.3 times the greatest width. The uncus of *T. hamza* is, however, more clumsy, tapering almost throughout its length under an angle of 60°-65° with the plane that is perpendicular to the longitudinal axis, whereas in *T. acteon* the uncus tapers more rapidly from its base, under an angle of 45°-55°, and the apical half is almost parallel-sided. There is some variation, and exact measurements are hampered by the curvature of the structure, but with some experience it is possible to separate the species on the basis of this character.

Another useful character relating to the uncus is the depth of the cleft between uncus and gnathos in lateral view. This cleft reaches to no more than halfway the length of the uncus in *T. hamza*, and to 2/3 or 3/4 the length of the uncus in *T. acteon*. The figures 5, 6, 11, 12 were made with



Figs. 3-14. Male genitalia : 3-8 : *Thymelicus hamza* ; 9-14 : *Thymelicus acteon*. 3, 4, 9, 10 : dorsal view of tegumen and uncus ; 5, 6, 11, 12 : lateral view of tegumen, uncus and gnathos ; 7, 8, 13, 14 : inside view of left valva.



Figs. 15-17. Female genitalia (sterigma, colliculum, ductus bursae): 15 : *Thymelicus hamza* ; 16 : *Thymelicus acteon* ; 17 : *Thymelicus alaicus*.

the genitalia still attached to the abdomen. In genitalic slides the gap between the uncus and gnathos may widen strongly by the pressure of the cover glass.

Distinctive characters are also found in the valvae. In *T. acteon* the valva is relatively slender, 2.4-2.8 times as long as greatest height, which is in distal half, in *T. hamza* it is shorter, 2.2-2.5 times as long as greatest height, which is about in the middle or in proximal half. The distal half of the costa has the dorsal edge straight in *T. acteon*, more or less concave in

T. hamza. It looks as if the distal half of the costa in *T. hamza* has been pressed down a little. In *T. acteon* the apex of the cucullus is sharply pointed, with one or two strong spines, which may or may not reach the dorsal edge of the costa, in *T. hamza* the cucullus has an irregular and blunt apex, which reaches as high as the dorsal edge of the costa, or even beyond.

Female genitalia (figs. 15, 16). – In *T. acteon* the sterigma is a folded plate densely covered with long microtrichia except in the central area behind the ostium ; colliculum funnel-like, rather lightly sclerotized, about twice as long as greatest width ; ductus four times as long as wide, with bifurcate sclerotization ; bursa elongate, almost twice as long as wide, no signum. In *T. hamza* the sterigma is a simple, smooth plate ; colliculum almost cylindrical, 3.5 times as long as wide, well sclerotized ; ductus short, about 2.3 times as long as wide, with strong bifurcate sclerotization ; bursa more rounded, about 1.5 times as long as wide, no signum.

Geographic variation and distribution of *Thymelicus hamza* (OBERTHÜR, 1876)

According to EVANS (1949) *T. hamza* is composed of four subspecies, viz., ssp. *hamza* OBERTHÜR, 1876 (Morocco, Algeria), ssp. *novissima* TURATI, 1921 (Cyrenaica), ssp. *nova* REVERDIN, 1916 (Turkey, Syria), and ssp. *alaica* FILIPJEV, 1931 (C. Asia). To the latter taxon he assigned “*Adopaea pfeifferi* BYTINSKI-SALZ, 1937” (N. Iran) as probable junior synonym. As EVANS very rarely examined types of taxa not present in the British Museum (Natural History), London, and as the type of only one of the taxa mentioned above (*hamza*) is in the collection of the British Museum (Natural History), it seemed useful to re-examine EVANS’ classification, especially since recent material from C. Asia, agreeing with “*Adopaea alaica* FILIPJEV”, did not seem to be conspecific with North African *T. hamza*.

Of the subspecies recognized by EVANS, ssp. *novissima* is only a small and light-coloured edition of ssp. *hamza*, whereas the other subspecies are said to have a different stigma on the forewing of the male. Ssp. *novissima* does not only agree with ssp. *hamza* in the shape of the stigma, but in the androconial hairscales. These hairscales consist of segments that easily break off and apparently serve as scent carriers [see the cover photograph of *Antenna* 4 (2) (1980)], showing similar particles stuck to the antenna of *Ochlodes venata* (BREMER & GREY)). The segments are cylindrical in ssp. *hamza* and ssp. *novissima* (and most other *Thymelicus* species, for that matter), as already clearly stated by TURATI (1921). In view of the

similarities there is no reason to suppose that ssp. *novissima* is anything but a subspecies of *T. hamza*.

The other subspecific names listed under *T. hamza* by Evans deserve a more extensive treatment, which is given in the next three paragraphs. It will be shown that the names cannot be associated with *T. hamza*. Consequently, *T. hamza* is restricted to North Africa, from Morocco to Cyrenaica (probably discontinuously distributed).

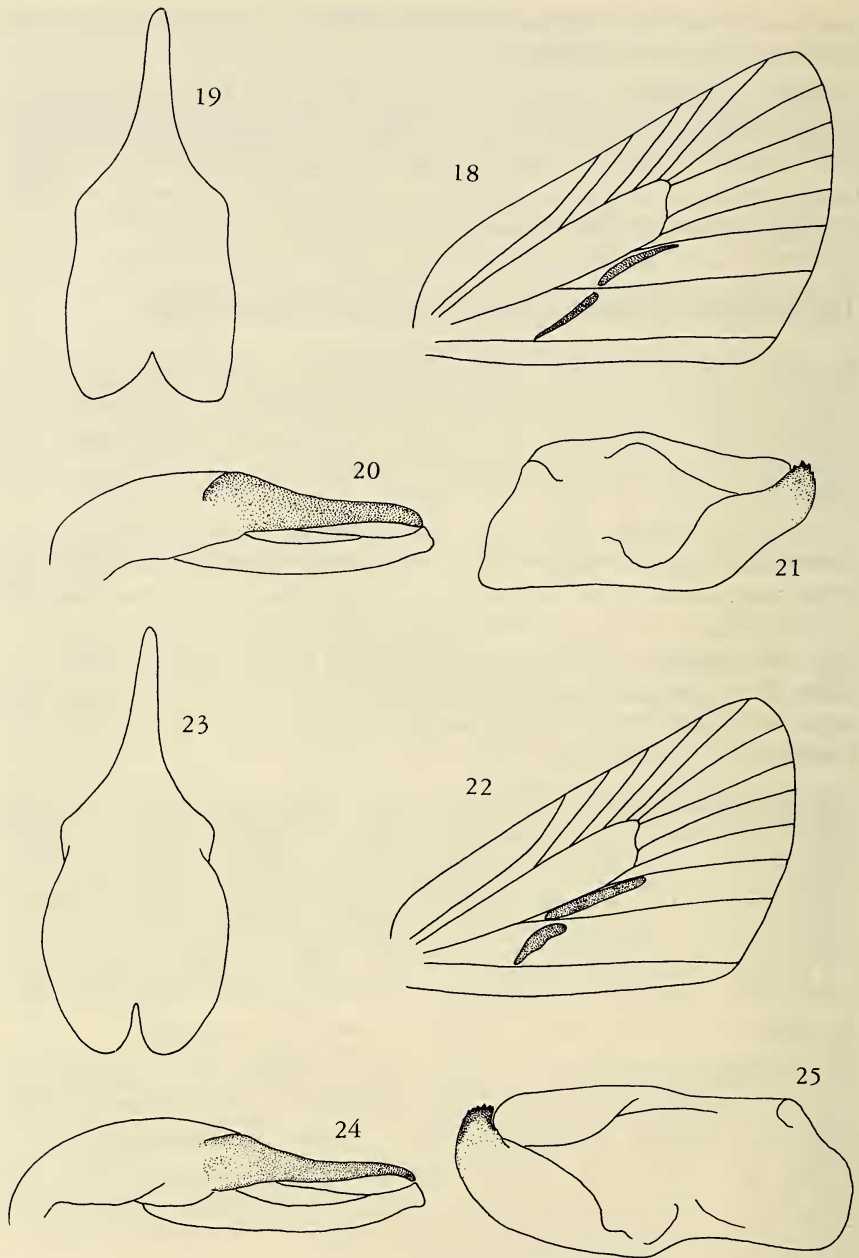
The systematic position of *Adopea* [sic] *nova* REVERDIN, 1916

REVERDIN (1916) described "*Adopea nova*" after 11 males from Amasia (at present Amasya, in northern Turkey). His description is very detailed and the figures (pl. 7 figs. 1, N, pl. 8 figs. 6, 8) are good. It is not clear why EVANS (1949) assigned this taxon as a subspecies to *T. hamza*. It differs from this species in the clearer tawny colour of the upperside with terminally darkened veins and the yellowish tawny, unicolourous underside of the hindwing, in the narrower stigma of the male, the shape of the androconial scales and the male genitalia (see below). The upperside is more like *T. sylvestris*, but the stigma is narrower and reaches to vein 1 (fig. 18), whereas in *T. sylvestris* it stops just before it reaches vein 1. It differs from the latter species also in the colour of the vestiture of the palps, being white and orange as in *T. hamza* and *T. acteon*, and not greyish as in *T. sylvestris*.

The androconial scales in *Thymelicus* are hairlike structures divided into longer or shorter segments that easily break off (see foregoing paragraph). The segments are cylindrical or nearly so and vary in length from about 15 μm to about 60 μm in all species except *T. hyrax* and REVERDIN'S "*Adopea nova*", where the segments are 10-20 μm in length and more or less fusiform (i.e. narrowing towards the ends). In other characters *T. hyrax* differs greatly in wing shape, colour and length of nudum (fig. 31; in *Adopea nova* the nudum is similar to that of *T. sylvestris*).

In the male genitalia (figs. 19-21) the uncus reminds of *T. acteon* (figs. 9, 10), but is a little less slender. Also the depth of the opening between uncus and gnathos is reminiscent of *T. acteon*, i.e. deeper than in *T. hamza*. The costa of the valvae is dorsally slightly concave in its outer half, as in *T. hamza*. The cucullus is different from both *T. hamza* and *T. acteon*, being slender, concave ventrodistally (as in *T. sylvestris*), with a rounded apex with short, sharp teeth.

In all, *Adopea nova* is different from all known *Thymelicus* species (*T. sylvaticus* and *T. stigma* lack the stigma of the male, *T. leonina* has



Figs. 18-21. *Thymelicus novus* : 18 : right forewing of male, with stigma ; 19 : dorsal view of tegumen and uncus ; 20 : lateral view of tegumen, uncus and gnathos ; 21 : inside view of right valva.

Figs. 22-25. *Thymelicus alaicus* : 22 : right forewing of male, with stigma ; 23 : dorsal view of tegumen and uncus ; 24 : lateral view of tegumen, uncus and gnathos ; 25 : inside view of left valva.

conspicuously blackened veins like *T. sylvaticus*) and cannot be assigned to any species as a geographic form. It has no characters in common with *T. hamza* that are not found in other species as well and there is no apparent reason for supposing a close relationship. The present data permit only one decision, viz., that REVERDIN was right in considering *Adopaea nova* a separate species. Since the type species of *Adopaea* BILLBERG, 1820 (*Papilio linea* DENIS & SCHIFFERMÜLLER, 1775 = *Papilio sylvestris* PODA, 1761) and *Thymelicus* HÜBNER, [1819] (*Papilio acteon* ROTTEMBURG, 1775) are currently considered congeneric, REVERDIN's species must now be known as *Thymelicus novus* (REVERDIN, 1916).

Apart from the type series from Amasya, the species has only been mentioned by EVANS (1949) from "Syria, Shar Deresy". Remarkably I have not found this species among the rich material that various collectors brought from Turkey in recent years.

The systematic position of *Adopaea alaica* FILIPJEV, 1931

The only plausible explanation for EVANS' assignment of this taxon to *T. hamza* seems to be the fact that it replaces the latter species geographically. For the same reason, it could as well be considered conspecific with *T. sylvestris*. A closer examination reveals that *Adopaea alaica* is certainly congeneric with the two species (and thus, should be known in the combination *Thymelicus alaicus*), but quite distinct from both. The original description (FILIPJEV, 1931) is clear and leaves no doubt about the identity of the taxon, but as it was published in a serial work not easily available to many students, the taxon is redescribed here, based on recent material from Central Asia in the Rijksmuseum van Natuurlijke Historie, Leiden.

Male. — Antennal club elongate; nudum orange-brown, covering 11 segments, nudum segments about 1.5 times to twice as wide as long, whole nudum about 5 times as long as wide (fig. 26). Palps, first and second segment white scaled, more or less creamish toward apex of second segment, slight admixture of black hairs, second segment black-scaled dorsally, third segment with black and white scales. Length of forewing, 10.5-13.1 mm. Upper side tawny, slightly darker towards outer margin, where the veins are finely outlined in black; narrowly black along outer margin, also black on hindwing in spaces 7 and 8, and half of space 1a; fringes ochreous, darkened at the end of the veins to about the middle of the fringes, especially on the hindwing where it gives the contour of the wing a slightly wavy appearance. Conspicuous black stigma, consisting of two parts, the upper one stretching from basal part of

vein 2 along cubitus to beyond origin of vein 3, the lower one in space 1b in continuation of the upper one, but clearly separated therefrom by tawny scales along vein 2 (fig. 22). Underside forewing tawny, but apical part and all of hindwing with a peculiar paler sheen ; inconspicuous pale yellow spots on forewing in spaces 6-8 and sometimes 3-5, and on hindwing in space 4/5.

Female. – As male (but without stigma), upper side more strongly infuscated along outer margin and with more or less visible median spots on both wings ; underside generally paler than in male, with better developed spots. Length of forewing, 12.3-13.4 mm.

Male genitalia (figs. 23-25). – In dorsal view tegumen ovoid, about 1.25 times as long as wide ; uncus strongly tapering from base, distal half almost parallel-sided. In lateral view, gnathos proximally reaching far under tegumen, distally reaching as far as apex of uncus, apex rectangular ; slit between uncus and gnathos almost reaching to base on uncus. Valva, apex of cucullus close to but not overlapping costa, not reaching beyond dorsal edge of costa, ending bluntly with a few short spines ; dorsal edge of costa in distal half straight.

Female genitalia (fig. 17). – Sterigma laterally and antevaginally swollen and closely set with long microtrichia, central and distal area smooth, but reverse of apical indentation with short hairs. Colliculum (antrum) lightly sclerotized, funnel-like, twice as long as greatest width. Ductus with some slight sclerotization, gradually widening into elongate bursa. No signum.

Discussion

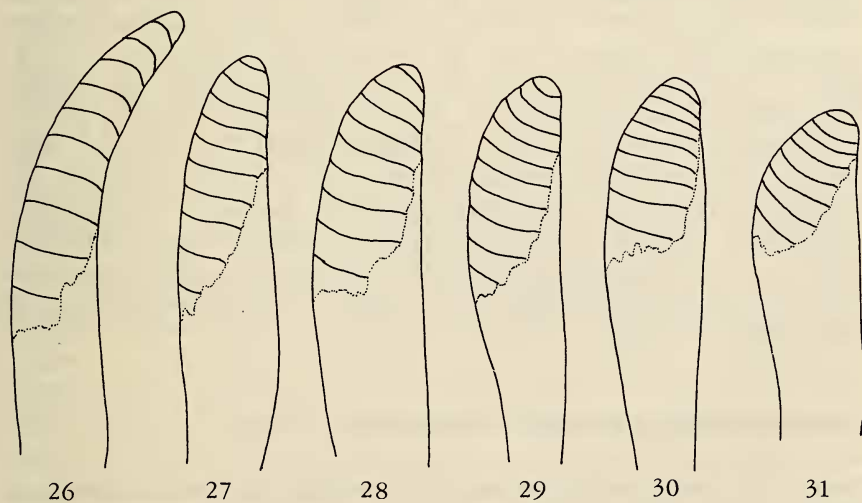
The species can easily be distinguished from all other species of the genus by the relative length of the antennal segments in the nudum, 1.5 times to twice as wide as long, thus making the whole nudum comparatively long. In the other species the antennal segments in the nudum vary from 3.5 to 6 times as wide as long (figs. 26-31).

Externally the male is most similar to *T. sylvestris*, but it can easily be distinguished, apart from the nudum, by the clearly bipartite, not entire stigma, the seemingly wavy outline of the hindwing, the presence of vague spots on the underside of the wings, and the white to pale yellow vestiture of the palps. The female reminds of the female of *T. hamza* and light-coloured specimens of *T. acteon*, but the vague pale yellow spots on the underside of the hindwing of *T. alaicus* do not occur in the other species.

T. alaicus is not only clearly distinguishable from *T. hamza* by external characters, also the male and female genitalia do not warrant EVANS' inclusion of this taxon in *T. hamza* (compare the descriptions of both). In the genitalia *T. alaicus* rather comes closer to *T. acteon* and particularly *T. sylvestris*. From the former it differs in the male genitalia in a blunter apex of the cucullus and in the female genitalia in the laterally and antevaginally swollen sterigma, which is moreover smooth distally. In *T. acteon* the sterigma is folded, not swollen, and densely set with microtrichia in the distal part.

From *T. sylvestris*, *T. alaicus* differs in the male genitalia in the ventral edge of the cucullus and the dorsal edge of the distal half of the costa being straight or convex instead of concave, and in the female genitalia in the elongate, not broadly triangular, and swollen sterigma, and in a more elongate bursa.

Although in many respects *T. alaicus* is most similar to *T. sylvestris*, it cannot be concluded that both species are more closely related to each other than to any other species. The differences between the species of *Thymelicus* known at present, although constant enough for species recognition, are slight and cannot yet be interpreted well phylogenetically. Examination of the larvae may yield more useful characters in this respect.



Figs. 26-31. Antennal nudum of *Thymelicus* species, lateroventral view : 26 : *T. alaicus* ; 27 : *T. lineola* ; 28 : *T. sylvestris* ; 29 : *T. acteon* ; 30 : *T. hamza* ; 31 : *T. hyrax*.

Distribution

The species has a wide range in Central Asia. The following list of localities is based on the original description by FILIPJEV, EVANS (1949) and examined material.

Afghanistan : Salang Pass ; Faizabad ; Khwahan. USSR : Tadzhikistan : Dushambe ; Romit (Karategin) ; Varzob ; Kandara ; Rive Vischarvi Valley ; Shugnan Mts (Gunt River) ; Kirgizia : Dzhityk ; Chamardan (Alai) ; Ula Kan (I have not found the exact position of the last two localities) ; Uzbekistan ; Pskem Valley.

Material examined. – 17 ♂ 8 ♀, Rijksmuseum van Natuurlijke Historie, Leiden.

The systematic position of *Adopaea pfeifferi* BYTINSKI-SALZ & BRANDT, 1937

The original description (BYTINSKI-SALZ & BRANDT, 1937) is not accompanied by an illustration. It is too vague to relate the name to a particular taxon in the genus *Thymelicus*. It is not clear why EVANS (1949) assigned the name tentatively to *T. hamza*. According to the original description there are three syntypes, two males in Coll. BRANDT and one male in Coll. BYTINSKI-SALZ, all collected by BRANDT at Keredj (about 40 km west of Teheran), 1700 m, 1.vii.1936. I could examine the two syntypes in Coll. BRANDT (now in Naturhistoriska Riksmuseet, Stockholm). One was dated 1.vii.1936, in conformity with the original description, the other 16.vi.1936. Both turned out to be quite normal specimens of *Thymelicus hyrax* (LEDERER, 1861), not different from specimens occurring in more western areas. EVANS (1949 : 346) recorded this species from "Asia Minor, Syria, Palestine, Armenia". In addition to the material collected by BRANDT in Iran, specimens were collected in recent years in the province of Teheran by BLOM and others (now in the Rijksmuseum van Natuurlijke Historie, Leiden). Apparently the species is very local and scarce.

Nomenclatural note on *Papilio sylvestris* PODA, 1761

PODA (1761) described the species, which is widely known as *Thymelicus sylvestris*, as follows (p. 79) : "Sylvestris. 51. P.P. alis integerrimis flavis limbo fusciscentis ; promoribus supra linea transversa lanceolata nigra. Habitat in sylvis". ("Sylvestris. 51. P[apilio] P[lebeji] with entire [i.e. not

tailed, crenulate, etc.] golden-yellow wings with darkening border ; a transverse, lanceolate, black line on the upperside of the forewings. Lives in forests"). OCHSENHEIMER (1808 : 224) thought that the description possibly applied to *Papilio comma* LINNAEUS, 1758 (currently placed in the genus *Hesperia*), and WERNEBURG (1864 : 296) was quite certain that this was the case as according to him, only in this species the androconial stigma can be said to be a "linea lanceolata".

VERITY (1940 : 99), following TUTT, remarked that PODA's description could as well apply to *Hesperia comma* (LINNAEUS) as to *Hesperia venata* BREMER & GREY, 1853 (currently placed in the genus *Ochlodes*). He even supposed that the latter was the more probable one as in the description no mention is made of the white spots on the underside of the hindwing, characteristic of *Hesperia comma*.

Meanwhile HEMMING (1934 : 38) had stated that there could be no doubt that *Papilio sylvestris* PODA, 1761, was the same species that up to that time was known as *Papilio flava* BRÜNNICH, 1763, and *Papilio thaumas* HUFNAGEL, 1766 (at the time both usually placed in the genus *Adopoea*). As PODA's name is the older one, it must replace the other names. Since then the names *flava* and *sylvestris* are both in use for the same species, in combination with the genus name *Adopoea* or *Thymelicus*. The former was, for instance, used by HIGGINS (1975), HIGGINS & RILEY (1980), LARSEN (1974), TEOBALDELLI (1976), and VERITY (1951), the latter by EVANS (1949), HIGGINS & RILEY (1970), KARSHOLT & SCHMIDT NIELSEN (1976), LERAUT (1980), and TEOBALDELLI (1978).

The problem lies in the interpretation of PODA's description. The only reason for considering *Papilio sylvestris* PODA synonymous with *Papilio comma* LINNAEUS or *Hesperia venata* BREMER & GREY, is the description of the stigma as "linea lanceolata". In the last two species this line is, indeed, more lanceolata than in *Papilio flava* BRÜNNICH, in which it is slightly narrower and may appear very slightly bent. It is, however, exaggerated to base the interpretation on such a subtle difference. Moreover, in *Papilio comma* the central area of the stigma is shining silvery, a character that would certainly have attracted PODA's attention, had he had this species before him. The absence of any observation of spots in the original description of *Papilio sylvestris* is a further argument against the idea that this species is the same as *Papilio comma* or *Hesperia venata*, as nobody can miss to observe the spots on upper and underside of the wings in the last two species. In my opinion this argument is much more important than the perhaps not entirely well chosen description of the stigma as "linea lanceolata". In this connection it may be useful to refer to the next species described by PODA, viz., *Papilio amyntas* (currently considered a

junior synonym of *Papilio arcania* LINNAEUS, now in the genus *Coenonympha*, Satyridae). The first part of the description is almost the same : "P.P. alis integerrimis flavis limbo fusco ...". Indeed, also in this species the upper side (here, of the forewing only) is unspotted yellow-brown with a dark border. If PODA's *sylvestris* had spots, they would certainly have been mentioned, if only to contrast the species with *Papilio amyntas*.

In summary, there is really little room for doubt : the original description of *Papilio sylvestris* PODA cannot be considered to refer to either *Papilio comma* LINNAEUS, or *Hesperia venata* BREMER & GREY. On the other hand, it agrees with *Papilio flava* BRÜNNICH and *Papilio thaumas* HUFNAGEL (over the identity of which there has never been a dispute) and HEMMING's (1934) action was entirely justified. It is hoped that in the near future PODA's name will entirely replace BRÜNNICH's name, being the older one.

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